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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	73.008	83.395	96.478	-	96.478	59.408	50.594	47.430	39.808	Continuing	Continuing
033: <i>ADV CREW SVC WPN</i>	5.500	1.698	-	-	-	-	-	-	-	Continuing	Continuing
S58: <i>SOLDIER ENHANCEMENT PROGRAM</i>	4.677	3.272	3.278	-	3.278	4.125	4.058	4.239	4.310	Continuing	Continuing
S60: <i>CLOTHING & EQUIPMENT</i>	9.365	6.316	5.537	-	5.537	1.899	1.947	2.082	2.117	Continuing	Continuing
S61: <i>ACIS ENGINEERING DEVELOPMENT</i>	9.997	10.936	17.175	-	17.175	18.817	21.772	12.516	12.642	Continuing	Continuing
S62: <i>Counter-Defilade Target Engagement - SDD</i>	23.548	35.980	34.412	-	34.412	1.983	-	-	-	Continuing	Continuing
S63: <i>SMALL ARMS IMPROVEMENT</i>	18.705	18.150	19.617	-	19.617	18.289	14.560	14.601	14.740	Continuing	Continuing
S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>	1.216	3.060	4.517	-	4.517	1.132	1.104	1.141	1.193	Continuing	Continuing
VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>	-	3.983	11.942	-	11.942	13.163	7.153	12.851	4.806	Continuing	Continuing

Note

Change Summary Explanation:

Fiscal Year 2011: Congressional Reduction of \$10.000 million to Project S62, Counter Defilade Target Engagement (CDTE) effort for Milestone B Delay. Omnibus reprogramming of \$5.000 million from Weapons and Tracked Combat Vehicle, Army (WTCV,A) Standard Study Number (SSN) G12800 to project 033 for XM806 development effort.

Fiscal Year 2012: Congressional Reduction of \$8.000 million to Project S61 for high concurrency of incremental efforts. Congressional Increase of \$16.046 million to Project S62 for Army requested transfer for Engineering and Manufacturing Development Testing from WTCV,A, line 17. Congressional Increase of \$1.700 million to Project 033 for Army requested transfer for re-testing of Lightweight .50 Caliber Machine Gun following a parts failure from WTCV,A line 20.

Fiscal Year 2013: Program increase of \$33.809 million to Project S62 for Counter Defilade Target Engagment efforts, program increase of \$7.954 million to Project VS5 for Soldier Protective Equipment engineering development efforts, and program increase of \$5.256 million to Project S63 for Small Arms Improvement engineering development efforts.

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A. Mission Description and Budget Item Justification		
<p>FY 2012 budget request funds Infantry Support Weapons. This program element (PE) Engineering and Manufacturing Development (EMD) manages the Soldier as a system, with the goal of increasing Soldiers' combat effectiveness, increasing survivability, and improving the Soldiers' quality of life. It develops and tests prototypes of weapons, clothing, equipment, and other items useful to support the Soldier.</p> <p>Project 033 (Advanced Crew Served Weapon) develops the Lightweight .50 Caliber Machine Gun which enables the Soldier to effectively suppress and incapacitate exposed personnel targets out to 2,000 meters as well as providing a capability to defeat light armored vehicles out to 1,500 meters. The new .50 Caliber weapon will reduce weight and recoil, and eliminate manual adjustment of headspace and timing.</p> <p>Project S58 (Soldier Enhancement Program) supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved Soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids.</p> <p>Project S59 (Soldier Support Equipment) supports system development and prototyping of critical Soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.</p> <p>Project S60 (Clothing and Equipment) supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier.</p> <p>Project S61 (Aircrew Integrated Systems) provides System Development programs with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance Helicopter.</p> <p>Project S62 (Counter-Defilade Target Engagement) the XM25, Individual Airburst Weapon System (IAWS) delivers a 25mm programmable high explosive airburst (HEAB) round to defeat defilade and point areas targets out to approximately 600 meters. Accurate and lethal engagement of defilade targets at the squad level is the number one capability gap identified by the United States Army Infantry Center (USAIC).</p> <p>Project S63 (Small Arms Improvements) demonstrates engineering development models or integrated commercial items designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability for small arms weapon systems and ammunition. FY2011 new programs include Improved Weapons Coatings, Personal Defense Weapon, 30 Round 5.56mm Magazine, Modular Handgun and Precision Sniper Rifle.</p> <p>Project S64 (CROWS) funds will be applied to continue enhancing CROWS capability and reliability, and to increase its application across combat and tactical platforms. This capability will enhance the Soldier's survivability, lethality and situational awareness.</p> <p>Project S70 (Personnel Recovery Support System) provides system research, development and testing of the Personal Recovery Support System/Personnel Recovery Support Equipment supporting operations to report and locate isolated, missing, detained or captured Soldiers.</p>		

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Project VS5 (Soldier Protective Equipment) supports engineering and manufacturing development of Individual Soldier Ballistic Protection equipment. It will leverage advancements in technology to continue incremental improvements to body armor (to include improved outer tactical vests, plate carriers, and helmets) and other personal protective equipment.

B. Program Change Summary (\$ in Millions)	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	80.337	73.728	48.553	-	48.553
Current President's Budget	73.008	83.395	96.478	-	96.478
Total Adjustments	-7.329	9.667	47.925	-	47.925
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.772	-			
• Adjustments to Budget Years	-0.557	-0.079	0.906	-	0.906
• Other Adjustments 1	-5.000	9.746	47.019	-	47.019

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
033: <i>ADV CREW SVC WPN</i>	5.500	1.698	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project develops the Lightweight .50 Caliber Machine Gun which will meet the U.S. Army/SOCOM requirements for a Lightweight Enhanced .50 Caliber Machine Gun. The project results in the development of a lightweight .50 Caliber machine gun system enabling the Soldier to effectively suppress and incapacitate exposed personnel targets out to 2,000 meters, as well as providing a capability to defeat lightly armored vehicles out to 1,500 meters. Successful development of the Lightweight .50 Caliber Machine Gun increases the warfighter's lethality while significantly reducing tactical load and supportability costs. The new .50 Caliber weapon reduces weight and recoil, and eliminates manual adjustment of headspace and timing.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<p>Title: Integrated Logistics Support (ILS)</p> <p align="right">Articles:</p> <p>Description: Description: Provide ILS for the Lightweight .50 Caliber Machine Gun.</p> <p>FY 2011 Accomplishments: Completed ILS technical documentation of redesigned weapon (i.e. drafted operator and maintenance technical manuals, and prepared for Logistics Demonstration).</p> <p>FY 2012 Plans: Update ILS technical documentation, conduct logistics demonstrations and provisioning conferences for the weapon. Develop ILS technical documentation for both the Blank Ammunition Firing Adapter (BFA) and the cradle. Conduct logistics demonstration for the BFA.</p>	0.250 0	0.200 0	-	-	-
<p>Title: Weapon System Design Test</p> <p align="right">Articles:</p> <p>Description: Description: Conduct weapon system design test.</p> <p>FY 2011 Accomplishments: Completed weapon redesign and build, conducted contractor testing to validate weapon redesign. Completed Government design and build of the iron sight, cradle and deflector.</p> <p>FY 2012 Plans:</p>	5.250 0	1.498 0	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Conduct Pre-Production Qualification Test to validate weapon design parameters and reliability. Conduct Limited User Test to evaluate operational effectiveness of the XM806 weapon system. Complete BFA design, build and test.					
Accomplishments/Planned Programs Subtotals	5.500	1.698	-	-	-

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• G12800 Lightweight .50 Caliber MG: <i>Lightweight .50 Caliber Machine Gun (W&TCV G12800)</i>		19.357	19.756	5.427	25.183		33.702	32.231	32.769	0.000	179.615

D. Acquisition Strategy
The Lightweight .50 Caliber Machine Gun is developed in support of the US Army Infantry Center (USAIC) Capability Production Document (CPD) for Enhanced .50 Caliber Machine Gun (M2A1). Milestone C is scheduled for third quarter FY2012. The development contractor is General Dynamics Armament and Technical Products (GDATP) of Burlington, Vermont. Milestone B was approved by the Milestone Decision Authority (MDA) - PEO Soldier, on July 8, 2008.

E. Performance Metrics
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
S58: <i>SOLDIER ENHANCEMENT PROGRAM</i>	4.677	3.272	3.278	-	3.278	4.125	4.058	4.239	4.310	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Soldier Enhancement Program (SEP) supports accelerated integration, modernization, and capability enhancement efforts of lighter, more lethal weapons, including improved optics, sights, and fire controls; and improved soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids. Projects are generally completed in three years or less.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Soldier Enhancement Program (SEP).	3.595	2.130	2.104	-	2.104
Articles:	0	0			
Description: Reviews candidate capability products through market surveys and product evaluations.					
FY 2011 Accomplishments: Evaluated and procured prototypes and tested the following Soldier equipment and weapons items: M26 Modular Assessor Shotgun System (MASS); Grenade Laser Range Finder; Sniper Tripod; Compact M110 Semi-Automatic Sniper System (SASS); Sniper Weapons Collimator; Sniper Quick Fire Sight; Parachute Oxygen Mask.					
FY 2012 Plans: Evaluate and procure prototypes and/or test Soldier equipment and weapons items. Up to 30+ proposals from Soldiers, Units, Industry and Academia. Will be submitted and reviewed by TRADOC and Material Developer (Program Executive Office (PEO)). SEP criteria will be applied and then submitted to a Council of Colonels (CoC) Executive Council to see if new capability initiatives will be approved for test and evaluation.					
FY 2013 Base Plans: Evaluate and procure prototypes and/or test Soldier equipment and weapons items. Up to 30+ proposals from Soldiers, Units, Industry and Academia will be submitted and reviewed by Training and Doctrine Command (TRADOC) and Material Developer, Program Executive Office (PEO). SEP criteria will be applied and then submitted to a CoC Executive Council to see if new capability initiatives will be approved for test and evaluation.					
Title: Engineering Support.	0.676	0.641	0.617	-	0.617

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<p align="right">Articles:</p> <p>Description: In-house engineering support and integration services, conduct technical evaluations and program reviews.</p> <p>FY 2011 Accomplishments: Provided in-house engineering support and integration services and conducted technical evaluations/program reviews for the following systems: Medical Bag, 3D Camouflage Flotation Collar; Field Tarp Modifications; Explosive Detector; Wireless Intercom; Body Heat Battery Charger; Rifle Sling; Breeching Tool; Strobe Light; Clip-On Thermal Imager; Airborne Goggle; 7 Day Bandage; Weapons Case; Field Tarp Mods; Weapons Covers; Rebar Cutter; Insect Repellent and Leader book.</p> <p>FY 2012 Plans: Continue to provide in-house engineering support and integration services and conduct technical evaluations/program reviews. Engineering capability is maintained for up to ten (10) new initiatives from submitted Soldier capability proposals such as: Multi-Shot Handheld, Sniper Mirage Mitigating Device and Advanced Emergency Bailout Parachute.</p> <p>FY 2013 Base Plans: Will continue to provide in-house engineering support and integration services and will conduct technical evaluations/program reviews. Engineering capability will be maintained for an expected 10-12 new initiatives from submitted Soldier capability proposals.</p>	0	0			
<p>Title: Market Surveys and Evaluations.</p> <p align="right">Articles:</p> <p>Description: Conduct market surveys and/or evaluations on new items such as: Medical Bag, 3D Camouflage Flotation Collar; Field Tarp Modifications; Explosive Detector; Wireless Intercom; Body Heat Battery Charger; Rifle Sling; Breeching Tool; Strobe Light; Clip-On Thermal Imager; Airborne Goggle; 7 Day Bandage; Weapons Case; Field Tarp Mods; Weapons Covers; Rebar Cutter; Insect Repellent and Leader book to commence development and demonstration. New items initiated will continue through evaluation/procurement of new prototypes.</p> <p>FY 2011 Accomplishments: Conducted market surveys and evaluations on Medical Bag, 3D Camouflage Flotation Collar; Field Tarp Modifications; Explosive Detector; Wireless Intercom; Body Heat Battery Charger; Rifle Sling; Breeching Tool;</p>	0.406 0	0.501 0	0.557	-	0.557

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Strobe Light; Clip-On Thermal Imager; Airborne Goggle; 7 Day Bandage; Weapons Case; Field Tarp Mods; Weapons Covers; Rebar Cutter; Insect Repellent and Leader book. FY 2012 Plans: Market survey capability is available up to ten (10) new proposals for Soldier capabilities which could include: Medical Bag, 3D Camouflage Flotation Collar; Field Tarp Modifications; Explosive Detector; Wireless Intercom; Body Heat Battery Charger; Rifle Sling; Breeching Tool; Strobe Light; Clip-On Thermal Imager; Airborne Goggle; 7 Day Bandage; Weapons Case; Field Tarp Mods; Weapons Covers; Rebar Cutter; Insect Repellent and Leader book. FY 2013 Base Plans: Market survey capability will be available for up to 10-12 new proposals for Soldier capabilities and Advanced Sniper Accessory Kit (ASAK) components.					
Accomplishments/Planned Programs Subtotals	4.677	3.272	3.278	-	3.278

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPA3 MA6800: <i>Soldier Enhancement - Other Support Equipment - MA6800</i>	5.385	9.591	6.522		6.522		1.698	0.324	0.330	Continuing	Continuing
• OPA2 BA5300: <i>Soldier Enhancement - Comms & Electronics Equipment - BA5300</i>	5.097	1.843	1.843		1.843		1.803	1.861	1.893	Continuing	Continuing
• WTCV GC0076: <i>Soldier Enhancement - Smalls Arms Weapons - GC0076</i>	4.018	2.453	2.378		2.378		2.444	2.530	2.572	Continuing	Continuing

D. Acquisition Strategy

The Soldier Enhancement Program (SEP) focuses on Commercial Off The Shelf (COTS) and Government Off The Shelf (GOTS) initiatives, Soldier capability enhancements and integration efforts that lend themselves to accelerated acquisition and fielding in the near term (three years or less). New SEP candidates are reviewed and approved semi-annually. SEP items are procured from multiple appropriations, i.e., Other Procurement Army (OPA) and Wheeled Tracked Combat Vehicles (WTCV).

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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	11.146	0.405		0.461		-		0.461	Continuing	Continuing	Continuing
Subtotal			11.146	0.405		0.461		-		0.461			

Remarks
Costs vary annually depending on number and type of items being evaluated.

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	35.887	1.610		1.588		-		1.588	Continuing	Continuing	Continuing
Subtotal			35.887	1.610		1.588		-		1.588			

Remarks
Candidates for the Soldier Enhancement Program are received, reviewed, and approved semi-annually. Contractual efforts are focused on procuring prototypes for testing.

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	6.424	0.466		0.420		-		0.420	Continuing	Continuing	Continuing
Subtotal			6.424	0.466		0.420		-		0.420			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	PEO Soldier:Ft. Belvoir, VA	11.806	0.791		0.809		-		0.809	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Subtotal			11.806	0.791		0.809		-		0.809				

Remarks
Testing costs vary annually depending on number and type of items being evaluated.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		65.263	3.272		3.278		-	3.278			

Remarks

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
S60: <i>CLOTHING & EQUIPMENT</i>	9.365	6.316	5.537	-	5.537	1.899	1.947	2.082	2.117	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This funding supports engineering and manufacturing development tasks related to individual clothing, equipment and personnel parachutes with the goal of enhancing the lethality, survivability, mobility and quality of life of the individual Soldier. It funds system integration and formal DT/OT of preproduction and production representative systems leveraging advancements in materials, nanotechnology, fabrication techniques, moisture management, flame resistance, antimicrobial treatments, insect protection, extreme environmental protection and chemical/biological protection to increase the capabilities and durability of tactical and non-tactical clothing and individual equipment.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<p>Title: Individual Soldier Ballistic Protection Moves to Program Element PE 0604601 VS5 in FY12</p> <p align="right">Articles:</p> <p>Description: Increase the Warfighter lethality and mobility, by optimizing Soldier protection while effectively managing all life cycle aspects of Personal Protective Equipment (PPE).</p> <p>FY 2011 Accomplishments: Completed incremental improvements and design work to the soft armor component (IOTV) of IBA system. Improvements transitioned to production in FY12 include the quick-release technology for improved functionality and other design features that improve mobility and functionality. Continued design efforts to improve functionality for small statured Soldiers and transferred through engineering changes into production in FY12. Entered into a Milestone B for the Family of Concealable Body Armor in 3Q FY11 and awarded prototype and test contracts in 4Q FY11. Continued to leverage, analyze and apply lessons-learned from emerging blast-testing data to new pelvic protection systems in support of Joint Urgent Operational Need (JUON CC-0457) for Pelvic Protection for Dismounted Warfighter. Completed system reliability study for the Non-Destructive Test Equipment (NDTE). Continued Enhanced Combat Helmet (ECH) First Article Testing through 4Q FY11 resulting in projected production and fielding decision by 1Q FY12. Completed development of test apparatus and procedures for improved scratch and fog resistant coatings for ballistic eyewear. Continued to assess emerging laser protection technologies.</p>	5.199 0	-	-	-	-
<p>Title: Soldier Uniforms and Clothing</p> <p align="right">Articles:</p>	2.107 0	3.331 0	3.537	-	3.537

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>CLOTHING & EQUIPMENT</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
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Description: Develop and provide superior and sustainable integrated clothing for the Soldier in a rapidly changing global environment.

FY 2011 Accomplishments:
Tested Flame Resistant (FR) materials for Fuel Handler Coveralls and alternate FR fabrics for FR Army Combat Uniform (FR ACUs). Conducted user evaluation of clothing bag items including an improved duffel bag and Army Combat Uniform - Alternate (ACU-A) to improve fit for small statured Soldiers. Qualified new duffel bag, washcloth, towel, and Army Service Uniform (ASU) shirt for clothing bag. Completed Army Combat Glove standardized product description. Processed system Engineering Change Proposals and technology insertion to update components of Generation III Extended Cold Weather Clothing System (ECWCS) to provide FR protection in cold weather clothing for deployers. Evaluated improved Physical Fitness Uniform (IPFU) trunks and T-shirts.

FY 2012 Plans:
Conduct Phase IV of the Army's effort to evaluate alternative camouflage patterns to the current Universal Camouflage Pattern (UCP). Conduct user evaluation for ECWCS GEN III product improvement to incorporate FR capabilities. Conduct evaluation of clothing bag Improved Physical Fitness Uniform (IPFU) moisture wicking t-shirt and trunk product improvement. Update Key Performance Parameters (KPPs) and conduct user evaluation of FREE program of record materiel solution with transition into production in FY13. Update Army Combat Shirt (ACS) to increase area of coverage to accommodate the plate carrier body armor system. Conduct user evaluation on Modular Boot System with transition to production in FY13. Down select the program of record material solution for the Mountain Combat Boot with MS C and transition to sustainment in FY13. Conduct materiel change efforts to improve the durability and comfort of tactical and environmental gloves.

FY 2013 Base Plans:
Will continue to refine designs and incorporate new materials/technology into clothing bag items, including the Improved Physical Fitness Uniform (IPFU) ensemble and the All-weather coat. Will conduct user evaluation and complete testing of the Glove Enhancement Initiative to improve functionality of Army gloves and consolidate task-specific handwear. Will initiate improvement to the women's Maternity Camouflage Uniforms to correct identified fit deficiencies. Will complete technical development of printing and color shade standards required for all uniform fabrics and findings to implement the Phase IV effort for a family of global camouflage pattern.

Title: Individual Equipment	2.059	2.985	2.000	-	2.000
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>CLOTHING & EQUIPMENT</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles:	0	0			
Description: Develop and provide superior and sustainable integrated individual equipment, for the Soldier, in a rapidly changing global environment.					
FY 2011 Accomplishments: Continued to refine design and incorporate new material/technology that pertains to form, fit, and function of the load bearing equipment. Initiated product improvement of the Modular Lightweight Load-carrying Equipment (MOLLE) medical bag. Continued to serve the Airborne community by developing equipment that is tailorable to Airborne operations. Completed Operational Test of the Advanced Emergency Bailout Parachute (AEBP). Purchased Advanced Ram Air Parachute (ARAPS) test items and conducted and completed Design Validation (DV) testing.					
FY 2012 Plans: Complete operational testing of Advanced Ram Air Parachute System (ARAPS). Conduct limited user evaluations of Modular Lightweight Load-carrying Equipment (MOLLE) components to include hydration carrier, improved medic set, and various pouches with transition to sustainment in FY13.					
FY 2013 Base Plans: Will continue to refine design and incorporate new material/technologies that pertain to form, fit and function of load bearing equipment with intent to lighten Soldier load. Will complete technical development of printing and color shade standards required for all equipment fabrics and findings to implement the Phase IV effort for a family of global camouflage. Will conduct user evaluation of the chemical/biological functionality of the On-The-Move Hydration System. Will complete Limited User Evaluation for Cold Weather Stove and Mountaineering Kits with MS C planned for FY14.					
Accomplishments/Planned Programs Subtotals	9.365	6.316	5.537	-	5.537

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• Clothing and Individual Eqp S53: <i>RDTE, 0603827.S53, Clothing and Equipment</i>	7.106	6.985	7.163		7.163		6.657	5.376	5.467	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>CLOTHING & EQUIPMENT</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Central Funding and Fielding: <i>OMA, 121017, Central Funding and Fielding</i>	71.429	72.171	75.961		75.961		124.365	125.670	127.008	Continuing	Continuing
• Advanced Tactical Parachute System: <i>OPA, MA7801, Advanced Tactical Parachute System</i>	41.591	52.185	45.497		45.497		44.234	42.016	40.234	Continuing	Continuing

D. Acquisition Strategy

Acquisition strategies for these programs vary in methods: (1) Quick fixes in 12-24 months or less from concept to Type Classification (TC); (2) modernization improvements which require limited RDT&E and are completed in more than 24-48 months from inception to Type Classification; and (3) fully integrated development that requires substantial RDT&E funding and is completed in four years or more.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>CLOTHING & EQUIPMENT</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In-House Support	Various	PM SPIE:Various	6.825	0.750		0.478		-		0.478	Continuing	Continuing	Continuing
Subtotal			6.825	0.750		0.478		-		0.478			

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	Various	NSRDEC:Natick, MA	12.169	1.075		1.000		-		1.000	Continuing	Continuing	Continuing
Development Contracts	Various	Various:Various	34.814	2.098		2.000		-		2.000	Continuing	Continuing	Continuing
Subtotal			46.983	3.173		3.000		-		3.000			

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	Various	Various:Various	13.723	0.973		0.859		-		0.859	Continuing	Continuing	Continuing
Subtotal			13.723	0.973		0.859		-		0.859			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	Various	Various:Various	13.638	1.420		1.200		-		1.200	Continuing	Continuing	Continuing
Subtotal			13.638	1.420		1.200		-		1.200			

			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			81.169	6.316		5.537		-		5.537			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>CLOTHING & EQUIPMENT</i>

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FoCBA transitioned to EMD			■																									
Award FoCBA Prototype & Test Contract				■																								
ECH FAT Testing		■	■																									
Alternate Camo Pattern OT (Phase IV)						■	■	■																				
Transition GEN III ECWCS Product Improvement to Sustainment											■																	
Moisture wicking IPFU T Shirt / Trunk Product Improvement						■	■	■	■	■	■	■																
Conduct FREE User Eval						■	■	■																				
Transition FREE to Production											■																	
Modular Boot User Eval						■	■	■																				
Modular Boot transition to Production											■																	
ARAPS DV Testing			■	■																								
Cold Weather Stove User Eval											■	■																
Cold Weather Stove MS-C																■												
Mountaineering Kit User Eval											■	■																
Mountaineering Kit MS-C																■												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S60: <i>CLOTHING & EQUIPMENT</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FoCBA transitioned to EMD	3	2011	3	2011
Award FoCBA Prototype & Test Contract	4	2011	4	2011
ECH FAT Testing	2	2011	4	2011
Alternate Camo Pattern OT (Phase IV)	1	2012	4	2012
Transition GEN III ECWCS Product Improvement to Sustainment	1	2013	1	2013
Moisture wicking IPFU T Shirt / Trunk Product Improvement	1	2012	4	2013
Conduct FREE User Eval	1	2012	4	2012
Transition FREE to Production	1	2013	1	2013
Modular Boot User Eval	1	2012	4	2012
Modular Boot transition to Production	1	2013	1	2013
ARAPS DV Testing	4	2011	4	2012
Cold Weather Stove User Eval	1	2013	4	2013
Cold Weather Stove MS-C	1	2014	1	2014
Mountaineering Kit User Eval	1	2013	4	2013
Mountaineering Kit MS-C	1	2014	1	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S61: <i>ACIS ENGINEERING DEVELOPMENT</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
S61: <i>ACIS ENGINEERING DEVELOPMENT</i>	9.997	10.936	17.175	-	17.175	18.817	21.772	12.516	12.642	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project conducts Engineering Manufacturing Development (EMD) for Army aircrew safety, survivability, and human performance. These funds completed the Air Warrior Encrypted Aircraft Wireless Intercom System qualification testing and resource the integration and qualification of the Air Soldier System (Air SS) program. The Air SS addresses capability gaps identified during combat operations in Iraq and Afghanistan including the effects of weight and bulk, limited situational awareness, and lack of functionally integrated aircrew life support equipment. Currently Army aircrews must trade off Air Warrior life support capabilities to ensure compatibility with the confined space of rotary wing crew stations. The Air SS addresses these and other gaps defined in the Air SS CDD using a Soldier as a System approach to provide improved situational awareness; provide terrain, weather, threat, and obstacle avoidance information to reduce aircraft mishaps and fatalities; resolve the lack of a common aircrew helmet with modern heads-up display technologies; increase the Soldier's ability to operate safely in degraded visual environments and extreme environmental conditions; and provide the capability to perform missions up to 11.0 hours in hot/humid environments and under chemical/biological threat conditions. The Air SS follows an evolutionary acquisition approach with two sub-increments that build to the full capability. Sub-increment 1a provides optimized survival equipment and integrated lightweight body armor reducing bulk and increasing mobility and crew member performance; layered clothing ensemble with active thermal regulation and chemical/biological protection for aviation Soldiers in all aircraft platforms; an integrated Soldier-worn electronics suite with integrated portable power that combines the functionality of bulky and separate situational/spatial awareness and life support systems and their separate batteries. Sub-increment 1b is the final and full Air SS capability that completely replaces the legacy Air Warrior system. This is the full integration of Air Soldier capabilities necessary to meet the Air SS KPP threshold requirement for a 25% weight and bulk reduction over the legacy Air Warrior Aviation Life Support Equipment system. Sub-increment 1b provides improved safety and Soldier survivability, increased situational awareness, and reduced pilot/crew member workload through an integrated gear carriage and extraction system that builds upon the Air SS capabilities developed under sub-increment 1a. Sub-increment 1b also enhances the previous Air SS integrated electronics suite by adding an integrated wireless aircraft and survival communications capability to reduce weight and bulk; a wide field of view high resolution day/night helmet mounted display for the AH-64 platforms; and optimized laser eye protection. This program does not duplicate any aircraft platform program efforts.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Aircrew Integrated Systems (ACIS) Engineering Development	9.997	10.936	17.175	-	17.175
Articles:	0	0			
Description: Integration, evaluation, testing, and qualification of Air Soldier System multi-phased improvements as technologies mature.					
FY 2011 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S61: <i>ACIS ENGINEERING DEVELOPMENT</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<p>Transitioned Air Soldier System sub-increment 1a advanced development improvements into engineering manufacturing development integration, maturation, and evaluation of improved cooling and integrated wearable power supply system, and other sub-increment 1a capabilities. Completed Encrypted Aircraft Wireless Intercom System testing and qualification.</p> <p>FY 2012 Plans: Air Soldier System sub-increment 1a. Integration and evaluation of improved cooling and integrated wearable power supply system. Begin head tracking, Soldier display, aircraft-mounted mission display, Soldier computer module integration and evaluation, integrated layered clothing system, and aircraft integration.</p> <p>FY 2013 Base Plans: Will continue Air Soldier System improvements, integration, evaluation, testing, and qualification including head tracking, Soldier display, aircraft mounted mission display, Soldier computer module, integrated layered clothing system, and aircraft integration.</p>					
Accomplishments/Planned Programs Subtotals	9.997	10.936	17.175	-	17.175

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Aircrew Integrated Sys Adv Dev: <i>RDTE, A PE 0603827A, PROJ S51 - Adv Dev</i>	0.156	0.136	0.141		0.141		0.164	0.157	0.160	Continuing	Continuing
• Aircrew Integrated Systems: <i>Aircraft Procurement, Army SSN AZ3110 - ACIS</i>	52.125	62.746	77.381		77.381		16.347	14.080	0.008	Continuing	Continuing

D. Acquisition Strategy

The Engineering Manufacturing Development (EMD) phase efforts for Aircrew Integrated Systems program include completion of the Air Warrior Encrypted Aircraft Wireless Intercom System (EAWIS) testing and qualification and continuation of the Air Soldier System integration, evaluation, testing, and qualification as technologies mature. The EAWIS is a hands-free communication device using radio signals for aircrew communication and interface with aircraft intercom and radios. The Air Soldier System follows an evolutionary acquisition approach with two sub-increments that build to the full capability. Through the two sub-increments, the Air Soldier System program focuses on reducing weight and bulk while integrating capabilities tailorable for aircrew on all Army aircraft platforms including optimized survival equipment, suite of integrated Soldier-worn electronics, integrated wireless aircraft and survival communications capability, and reduced clothing layers. A day and night heads-up display, external audio, don in flight CB protection and enhanced laser eye protection against multiple wavelengths of laser threats will be integrated

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604601A: <i>Infantry Support Weapons</i>	S61: <i>ACIS ENGINEERING DEVELOPMENT</i>

onto the common HGU-56/P helmet. Integration, testing, and qualification efforts are accomplished through a combination of contracts with industry and by Military Interdepartmental Purchase Requests (MIPRs) to other government agencies.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S61: <i>ACIS ENGINEERING DEVELOPMENT</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allot	Various Government:Huntsville, Alabama	1.503	0.359		0.278		-		0.278	Continuing	Continuing	Continuing
Subtotal			1.503	0.359		0.278		-		0.278			

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior and Air Soldier System Development	C/CPFF	Various Government:Various Locations	29.983	9.630		14.329		-		14.329	Continuing	Continuing	Continuing
Subtotal			29.983	9.630		14.329		-		14.329			

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	RO	Various Government:Various Locations	1.137	0.947		0.754		-		0.754	Continuing	Continuing	Continuing
Subtotal			1.137	0.947		0.754		-		0.754			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	RO	Various Activities:Various Locations	6.035	-		1.814		-		1.814	Continuing	Continuing	Continuing
Subtotal			6.035	-		1.814		-		1.814			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>			PROJECT S61: <i>ACIS ENGINEERING DEVELOPMENT</i>					
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	38.658	10.936		17.175		-		17.175			

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S61: <i>ACIS ENGINEERING DEVELOPMENT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Air Soldier System System Dev and Dem and Qualification Testing	1	2012	4	2017
Air Soldier System Milestone B	1	2012	1	2012
Air Soldier System Preliminary Design Review (PDR), Sub-increment 1a	4	2012	4	2012
Air Soldier System Critical Design Review (CDR), Sub-increment 1a	3	2013	3	2013
Air Soldier System Developmental Testing (DT), Sub-increment 1a	2	2014	2	2014
Air Soldier System Preliminary Design Review (PDR), Sub-increment 1b	2	2014	2	2014
Air Soldier System Initial Operational Test & Evaluation(IOT&E),Sub-increment 1a	2	2014	3	2014
Air Soldier System Milestone C/Full Rate Production (FRP), Sub-increment 1a	4	2014	4	2014
Air Soldier System Critical Design Review (CDR), Sub-increment 1b	3	2015	3	2015
Air Soldier System Developmental Testing Sub-increment 1b	4	2015	1	2016
Air Soldier System Milestone C/Low Rate Initial Production, Sub-increment 1b	3	2016	3	2016
Air Soldier System Initial Operational Test & Evaluation, Sub-increment 1b	2	2017	3	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
S62: <i>Counter-Defilade Target Engagement - SDD</i>	23.548	35.980	34.412	-	34.412	1.983	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note

The XM25 Counter Defilade Target Engagement System (CDTE) program title changed to the XM25 Individual Semi-Automatic Airburst System (ISAAS).

A. Mission Description and Budget Item Justification

The Maneuver Center of Excellence (MCoE), FT Benning, GA (User Community) identifies the Counter Defilade Target Engagement (CDTE) as a critical capability gap for our Soldiers in combat. The number one materiel solution to mitigate the critical capability gap (defeating defilade targets from 15-500m) is the XM25 Individual Semi-Automatic Airburst System (ISAAS). The XM25 ISAAS provides the Infantry Soldier with a leap-ahead overmatch capability that dramatically increases lethality, range, and capability through the use of a family of low-velocity programmable 25mm ammunition and allows the Soldier to engage defilade targets with a high degree of accuracy while posing minimal burden, in terms of weight and size. The XM25 ISAAS fires 25mm munitions including high-explosive airburst (HEAB), armor-piercing, breaching, less-than-lethal, and training rounds. The XM25 comes with a target acquisition/fire control that integrates thermal capability with direct-view optics, laser rangefinder, compass, fuze setter, ballistic computer, laser pointer and illuminator and internal display. The XM25 has a 500-meter point target range and a 700-meter area target range capable of defeating defilade (hidden) targets.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Engineering and Manufacturing Development/Fabricate	13.534	26.769	23.120	-	23.120
Articles:	0	0			
Description: Description: Engineering Development and Fabrication					
FY 2011 Accomplishments: Implemented technical and producible design improvements to the weapon system such as reduction in weight and increased weapon reliability/safety; the target acquisition/fire control (TA/FC) specific to power reduction/electronics obsolescence, housing, display module and menu; and ammunition (ammo) improvements to optimize fragmentation and lethality. Implemented contractor facility improvements to ramp up manufacturing process developments and provided for the acquisition of long lead items. Also completed the final packaging design for TA/FC and ammo.					
FY 2012 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
Continue producible design improvements specific to weight reduction, reliability and survivability of the weapons system, the weapon system battery, target acquisition/fire control (TA/FC), and the ammunition magazine based on user feedback of the five (5) prototypes in Afghanistan's Forward Operational Assessment (FOA) 1B. Initiate prototype manufacturing tooling. Build 10 weapon prototypes to support contractor weapon system assessments and verification testing. Initiate build of 25 additional weapon prototypes for government qualification testing.					
FY 2013 Base Plans: Will fabricate and integrate design enhancements to the weapons systems and subsystems, target acquisition/fire control (TA/FC) and ammunition identified through contractor subsystem testing and FOA 1B. Will assemble prototype systems to include weapon, TA/FC and ammunition for government testing. Will finalize weapon system design for Critical Design Review (CDR). Will complete build of 36 weapon systems for the second Forward Operational Assessment (FOA) 2.					
Title: Engineering and Training Development					
Articles:					
Description: Description: Engineering and Training Development					
FY 2011 Accomplishments: Provided engineering/training support and oversight of technical design improvements and testing of the weapon system, target acquisition/fire control (TA/FC) and ammunition both within contractor and government facilities as well as in the field for FOA 1B. Completed event based technical reviews including the System Requirement Review, System Functional Reviews, evaluations and verifications of subsystem performance requirements. Performed engineering oversight required for contractor inspections, development and implementation of training solutions required for successful field demonstration and assessment.					
FY 2012 Plans: Continue engineering support required for producible design improvements specific to reliability and survivability of the weapon system battery, target acquisition/fire control (TA/FC) and ammunition magazine. Engineering support is necessary for all testing to meet army performance objectives. Preparation of documentation to perform technical design, performance and safety reviews.					
FY 2013 Base Plans: Will provide engineering support for weapons systems, subsystems, target acquisition/fire control (TA/FC) and software design enhancements required to perform technical design reviews to include, combined system					
	2.530	2.300	2.500	-	2.500
	0	0			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
verification reviews, and production readiness review to update system engineering master plans and integrate technical design efforts. Will conduct training efforts for Limited User Test (LUT).						
Title: Development Test and Evaluation		6.454	6.000	8.000	-	8.000
		Articles: 0	0			
Description: Description: Test and Evaluate						
FY 2011 Accomplishments: Conducted initial developmental testing and evaluation of weapon systems, target acquisition/fire control (TA/FC) and ammunition prototypes. Selected weapon systems, TA/FC and ammo design for Preliminary Design Review (PDR) and conducted performance evaluation and structural integrity tests. Specific ammunition testing conducted for the high explosive airbursting (HEAB) and all variants included spin/penetration, velocity, fragment patterns and fragment size.						
FY 2012 Plans: Contractor conducts weapon system and subsystem performance testing for, reliability, simulated natural environments (hot, cold, sand rain etc.), electromagnetic environmental effects (E3) testing, human factors and rough handling tests. Weapon also sustains various prequalification testing. The target acquisition/fire control (TA/FC) and all ammunition variants complete developmental and safety testing and evaluation.						
FY 2013 Base Plans: Will conduct Government and contractor test efforts of weapon systems including the target acquisition/fire control (TA/FC) and ammunition that include the following: Pre-Production Qualification tests, Electromagnetic Environmental Effects (E3) testing, Simulated Natural Environment Test, Limited User Testing (LUT).						
Title: Program Management		1.030	0.911	0.792	-	0.792
		Articles: 0	0			
Description: Description: Program Management						
FY 2011 Accomplishments: Prepared and staffed Acquisition Strategy, Acquisition Program Baseline, Systems Engineering Plan, Acquisition Plan, Program Protection Plan, Test & Evaluation Master Plan and the Life Cycle Sustainment Plan. Assembled						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
and conducted Integrated Product Team meetings and Integrated Baseline Reviews. Awarded Engineering and Manufacturing Development contract.					
<i>FY 2012 Plans:</i> The Program Management office provides oversight of all engineering support and test activities throughout the fiscal year. Manage the life cycle mission of the program to include future acquisition and sustainment plans. Provide oversight of design improvements, weapon system assessments, developmental, verification and prequalification testing. Prepare documentation to perform technical design, performance and safety reviews.					
<i>FY 2013 Base Plans:</i> Will continue Program Management oversight to achieve Milestone C and transition to Low Rate Initial Production (LRIP).					
Accomplishments/Planned Programs Subtotals	23.548	35.980	34.412	-	34.412

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• G16101: <i>(G16101) Integrated Air Burst Weapon System Family</i>			0.506		0.506		71.208	71.196	72.387	Continuing	Continuing
• E92500: <i>(E92500) CTG, 25MM, XM1083 High Explosive Air Burst (HEAB)</i>			4.506		4.506		15.892	32.608	33.163	Continuing	Continuing

D. Acquisition Strategy

The XM25 ISAAS transitioned from the Technology and Development phase to Engineering and Manufacturing Development (EMD) phase by achieving Milestone B in December 2010. The EMD phase completes development of the XM25 ISAAS and verifies training solutions for the Milestone C approval in FY 2013. Research and Development acquisition strategy is to use sole source contracting with ATK (formerly known as Alliant Techsystems), Plymouth, MN.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Performed by Government:Various Activities	1.906	0.911		0.792		-		0.792	Continuing	Continuing	Continuing
Subtotal			1.906	0.911		0.792		-		0.792			

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Design, Develop & Fabricate	SS/CPFF	ATK:Plymouth, MN	38.566	26.769		23.120		-		23.120	Continuing	Continuing	Continuing
Subtotal			38.566	26.769		23.120		-		23.120			

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	Various	Various:Multiple	4.130	2.100		2.300		-		2.300	Continuing	Continuing	Continuing
Training Development Support	MIPR	PEO STRI:PEO STRI	0.400	0.200		0.200		-		0.200	Continuing	Continuing	Continuing
Subtotal			4.530	2.300		2.500		-		2.500			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental/System Tests and Articles	SS/CPFF	Performed by Contractor:ATK, Plymouth, MN	14.854	-		-		-		-	0.000	14.854	0.000
Developmental/ Operational Tests	Various	Performed by Government:Various Activities	-	6.000		8.000		-		8.000	Continuing	Continuing	Continuing
Subtotal			14.854	6.000		8.000		-		8.000			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				

Remarks

Contractor Tests - The contractors will finalize the system design and build prototypes to conduct pre-qualification test. A total of 8 weapon systems, including TA/FC along with 11,000 TP rounds, 1,000 HEAB rounds will be built for contractors pre-qualification tests. There will not be any investment made by the government in contractors test facilities for this program. Tests that require facilities the contractors do not have will be performed at government owned facilities or other third party vendors.

Government Tests - In FY 2013, 10 weapon systems, including the TA/FC along with 45,000 TP rounds, 10,000 HEAB rounds will be delivered to the Government for Pre-Production Qualification Tests (PPQT) and simulated Natural Environment Test at Government facilities. Results from this and other tests will be used to support MS C scheduled for 4th Qtr FY 2013. During the Production & Deployment Phase (starting in FY 2014), up to 16 systems and a yet to be determined number of rounds (depending on the outcome of the PPQT) will be subjected to Production Qualification Tests (PQT) at Government facilities. Prior to Full-Rate Production (FRP), up to 10 systems will be subjected to First Article Tests (FAT). All the capabilities to conduct Developmental Tests already exist at Army Proving Grounds with no new facility investment anticipated.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	59.856	35.980		34.412		-		34.412			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MS C/Type Classification-Limited Procurement																												
Production Qualification Test (PQT)																												
Initial Operational Test & Evaluation (IOT&E)																												
Low Rate Initial Production (LRIP)																												
Type Classification - Standard																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S62: <i>Counter-Defilade Target Engagement - SDD</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MS C/Type Classification-Limited Procurement	4	2013	4	2013
Production Qualification Test (PQT)	1	2014	2	2014
Initial Operational Test & Evaluation (IOT&E)	2	2014	1	2015
Low Rate Initial Production (LRIP)	4	2013	1	2015
Type Classification - Standard	1	2015	1	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
S63: <i>SMALL ARMS IMPROVEMENT</i>	18.705	18.150	19.617	-	19.617	18.289	14.560	14.601	14.740	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Small Arms Improvement Engineering and Manufacturing Development (EMD) program provides funds to transition components or prototypes from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4) and other domestic and foreign sources of small arms weapons to demonstrate, test and evaluate capability near or at planned operational requirements. Small arms systems include weapons ranging up to 40 millimeter in caliber. Current and future efforts focus on system improvements designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability of weapons to include ammunition when developing and/or evaluating standard and non-standard weapons. Focus areas include system development, integration, demonstration, test and evaluate components, prototypes and operational system prototypes of small arms weapons and/or enhancements. Benefits include continuous improvements to small arms weapons, fire control equipment, optics, gun barrels, ancillary equipment, training devices, component mounts, weapon mounts, and weapon/ammunition interface of current small arms fleet or new weapon systems. New starts in FY 2013 include the transition of barrel twist optimization for weapon enhancement, Squad Common Optic (SCO) for combat optics, and Integrated Fire Control from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4). New initiatives in FY 2013 include the evaluation of the Army's M9 Bayonet and enhancements to the Common Remotely Operated Weapon Station (CROWS).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: New Weapons	9.148	10.687	9.545	-	9.545
Articles:	0	0			
Description: Description: Development of new weapons					
FY 2011 Accomplishments: Individual Carbine Competition: Based on Milestone B decision, completed all required acquisition documentation and approvals to release a request for proposal. Initiated Source Selection Evaluation Board. Performed systems requirements and test readiness reviews. Coordinated an ammunition compatibility shoot for interested vendors with the M855A1 ammunition. Conducted an Industry Day Conference that attracted over thirty interested vendors. Developed test plans product evaluation. Provided engineering and cost analysis support to Maneuver Center of Excellence for the Modular Handgun requirement.					
FY 2012 Plans: Individual Carbine Competition: Complete Phases I and II of competitive test and inspection program. Conduct a live fire test and evaluation for weapons non-standard caliber ammunition. Conduct scoring conferences					

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
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<p>for data generated by testing. Perform down-selection of most qualified vendors and award three competitive contracts. New starts: Initiate the Precision Sniper Rifle program.</p> <p>FY 2013 Base Plans: Will down select individual carbine competitors from competitive evaluation/testing phase to conduct system testing and user evaluation of remaining weapons. Will evaluate on-going initiative of the Precision Sniper Rifle. Will initiate development and engineering testing efforts to support new Capability Development Documents.</p> <p>Title: Small Arms Weapons Enhancements</p> <p align="right">Articles:</p> <p>Description: Description: Enhancement developments of small arms weapons</p> <p>FY 2011 Accomplishments: M4 Carbine Product Improvement Program: Completed request for proposal to upgrade bolt and bolt carrier. Initiated testing and inspection of bolt/carrier bid samples. Released the request for proposal to upgrade rail system. Sniper Upgrades: Continued system testing and evaluation of production-representative articles to improve felt recoil and fire control solutions. XM205 Tripod: Completed Operational Test. New start: Initiated suppressors evaluation in support of Maneuver Center of Excellence requirement generation.</p> <p>FY 2012 Plans: M4 Carbine Product Improvement Program: Continue evaluation and down selection process. Initiate technical testing evaluations of the rail system hardware. Sniper Upgrades: Continue system testing and evaluation of components enhancements. Transition sub-components to sniper rifle modification production. Close Quarter Battle Kit: Re-compete and separate cleaning kits into two smaller kits and a separate multipurpose tool. XM205 Tripod: Submit final report for Milestone C. Continue suppressors evaluation.</p> <p>FY 2013 Base Plans: Will transition M4 Carbine Product Improvements initiatives to M4 Carbine Modification procurement program. Will perform, evaluate and analyze engineering, development and testing of sniper upgrades, suppressors, studies to evaluate upgrades to the Common Remotely Operated Weapon Station (CROWS), and Close Quarter Battle Kit re-competition. Will asses M4 reliability testing of functional impact with the introduction of enhanced performance ammunition on current small caliber weapon designs. Areas of potential impact include weapon</p>	6.097 0	5.013 0	9.229	-	9.229
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army				DATE: February 2012																			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>		PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>																			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)																							
system reliability, durability, and maintainability. Will continue suppressors evaluation. Transition barrel twist optimization from Small Arms Improvement, Project S54, Program Element 0603827A (Budget Activity 4).																							
Title: Ammunition																							
Articles:																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">FY 2011</th> <th style="width: 10%;">FY 2012</th> <th style="width: 10%;">FY 2013 Base</th> <th style="width: 10%;">FY 2013 OCO</th> <th style="width: 10%;">FY 2013 Total</th> </tr> </thead> <tbody> <tr> <td></td> <td align="right">2.265</td> <td align="right">1.600</td> <td align="center">-</td> <td align="center">-</td> <td align="center">-</td> </tr> <tr> <td></td> <td align="right">0</td> <td align="right">0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total		2.265	1.600	-	-	-		0	0			
	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total																		
	2.265	1.600	-	-	-																		
	0	0																					
Description: Description: Improvement of small arms ammunition																							
FY 2011 Accomplishments: Tested and evaluated prototype XM1112 Airburst Non-Lethal Cartridges. Awarded contract to incorporate Micro Electro-Mechanical System (MEMS) equipment and provide safe and arm assemblies for fuze and cartridge testing. Initiated effort to implement insensitive munitions technology for the air bursting fuze for low velocity high explosive airbursting (HEAB) cartridge. Initiated the transition of small arms ammunition Research, Development, Test and Evaluation (RDT&E) initiatives to Program Executive Office Ammunition.																							
FY 2012 Plans: Continue engineering, test and evaluation of the XM1112 40mm Low Velocity Airburst Non-Lethal Munitions (ANLM). Conduct prototype testing of Micro Electro-Mechanical System (MEMS) safe and arm mechanisms. Complete the transition of small arms ammunition Research, Development, Test and Evaluation (RDT&E) initiatives to Program Executive Office Ammunition.																							
Title: Combat Optics																							
Articles:																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">FY 2011</th> <th style="width: 10%;">FY 2012</th> <th style="width: 10%;">FY 2013 Base</th> <th style="width: 10%;">FY 2013 OCO</th> <th style="width: 10%;">FY 2013 Total</th> </tr> </thead> <tbody> <tr> <td></td> <td align="center">-</td> <td align="right">0.100</td> <td align="right">0.100</td> <td align="center">-</td> <td align="right">0.100</td> </tr> <tr> <td></td> <td></td> <td align="right">0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total		-	0.100	0.100	-	0.100			0			
	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total																		
	-	0.100	0.100	-	0.100																		
		0																					
Description: Description: Improvement of combat optics																							
FY 2012 Plans: Continue market research of optics industry. Initiate engineering support and evaluation of weapon optics performance requirements..																							
FY 2013 Base Plans: Will continue engineering support and services to include engineering evaluations, verification and validation of weapon optics performance requirements to include the Squad Common Optic (SCO) and the Power Rail. Transition SCO from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4).																							
Title: Fire Control																							
Articles:																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">FY 2011</th> <th style="width: 10%;">FY 2012</th> <th style="width: 10%;">FY 2013 Base</th> <th style="width: 10%;">FY 2013 OCO</th> <th style="width: 10%;">FY 2013 Total</th> </tr> </thead> <tbody> <tr> <td></td> <td align="right">1.195</td> <td align="right">0.750</td> <td align="right">0.743</td> <td align="center">-</td> <td align="right">0.743</td> </tr> <tr> <td></td> <td align="right">0</td> <td align="right">0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total		1.195	0.750	0.743	-	0.743		0	0			
	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total																		
	1.195	0.750	0.743	-	0.743																		
	0	0																					

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<p>Description: Description: Improvement of small arms fire control.</p> <p>FY 2011 Accomplishments: XM320 Grenade Launcher: Conducted Developmental Test (DT) Phase II to verify all defect fixes identified during DT Phase I on candidate Grenadier Laser Range Finders (GLRFs) with integrated fire control/sights from two different vendors.</p> <p>FY 2012 Plans: XM320 Grenade Launcher: Award competitive contract to provide Grenadier Sight Systems (GSSs) for technical testing and the Limited User Test (LUT).</p> <p>FY 2013 Base Plans: XM320 Grenade Launcher: Will transition upgraded Fire Control to M320 production. Integrated Fire Control for Small Arms: Will transition the integrated fire control for small arms program from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4) and initiate engineering manufacturing development phase.</p>					
Accomplishments/Planned Programs Subtotals	18.705	18.150	19.617	-	19.617

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• Small Arms Improvement: <i>RDTE S54, Program Element 0603827A - Soldier Systems - Advanced Development</i>	4.805	4.577	4.690		4.690		5.469	5.100	5.186	Continuing	Continuing
• M249 SAW MODS: <i>WTCV, GZ1290, M24 Squad Automatic Weapon (SAW) MODS</i>	5.888	8.480	4.996		4.996		5.155	5.245	5.333	Continuing	Continuing
• M16 Rifle Mods: <i>WTCV, GZ2800, M16 Rifle MODS</i>	3.832	3.476	3.306	15.422	18.728		3.283	3.338	3.394	Continuing	Continuing
• M240 Medium Machine Gun MODS: <i>WTCV, GZ1300, M240 Medium Machine Gun MODS</i>	15.762	15.718	6.806		6.806		4.685	4.768	4.847	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• M4 Carbine MODS: <i>WTCV, GB3007, M4 Carbine MODS</i>	56.864	41.892	27.243		27.243		32.170	36.195	23.265	Continuing	Continuing
• M2 .50 CAL Heavy Machine Gun MODS: <i>WTCV, GB4000, M2 .50 CAL Heavy Machine Gun MODS</i>	60.000	48.856	39.974		39.974		38.041	29.690	50.176	Continuing	Continuing
• Sniper Rifle MODS: <i>WTCV, GZ1500, Sniper Rifle MODS</i>	20.900	1.994	14.113		14.113		2.018	2.019	2.053	Continuing	Continuing
• Modification Less Than \$5.0M: <i>WTCV, GC0925, Modifications Less Than \$5.0M</i>	6.048	2.973	3.072		3.072		3.122	3.179	3.232	Continuing	Continuing

D. Acquisition Strategy

Primary strategy is to mature and finalize design efforts, award Research, Development, Test and Evaluation (RDT&E) hardware contracts, and test and evaluate systems that result in type classification and follow-on production contract awards.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Allot	PM Soldier Weapons,:Picatinny Arsenal	4.042	2.475		2.904		-		2.904	Continuing	Continuing	Continuing
Travel	MIPR	PM Soldier Weapons,:Picatinny Arsenal	0.579	0.205		0.250		-		0.250	Continuing	Continuing	Continuing
Subtotal			4.621	2.680		3.154		-		3.154			

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fabrication	C/CPFF	Various,:Multiple	-	-		0.300		-		0.300	Continuing	Continuing	Continuing
Hardware Development	MIPR	Army Research Development Engineering Centers,:Multiple	6.741	0.388		0.100		-		0.100	Continuing	Continuing	Continuing
Subtotal			6.741	0.388		0.400		-		0.400			

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering	MIPR	Army Research Development Engineering Centers,:Multiple	18.934	8.279		8.380		-		8.380	Continuing	Continuing	Continuing
Logistics	MIPR	TACOM,:Warren	1.304	1.291		1.383		-		1.383	Continuing	Continuing	Continuing
Human Research and Engineering	MIPR	Army Research Laboratory,:Aberdeen Proving Ground	1.724	0.598		0.600		-		0.600	Continuing	Continuing	Continuing
Subtotal			21.962	10.168		10.363		-		10.363			

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Precision Sniper Rifle					[REDACTED]																							
Sub-Compact Weapon																												
Lightweight Machine Gun																												
Integrated Fire Control for Small Arms																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S63: <i>SMALL ARMS IMPROVEMENT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Precision Sniper Rifle	1	2012	4	2014
Sub-Compact Weapon	1	2014	4	2017
Lightweight Machine Gun	1	2014	4	2017
Integrated Fire Control for Small Arms	2	2013	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>	1.216	3.060	4.517	-	4.517	1.132	1.104	1.141	1.193	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project provides the continued maturation of PRSS products that enable operations to report and locate isolated, missing, detained or captured (IMDC) Soldiers. The PRSS program consists of the enhancement of existing products to ensure continued successful interoperability within the relevant theater of operations, and the demonstration of a prototype Personal Reporting Device (PRD) that operates over a secure architecture.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Development of Personnel Recovery Support System (PRSS)	1.216	3.060	4.517	-	4.517
Articles:	0	0			
Description: Integration, evaluation, testing, and qualification of PRSS products to ensure continued successful interoperability within the relevant theater of operation, and development of a PRD that operates over a secure architecture.					
FY 2011 Accomplishments: Validated performance enhancements of the classified PRSS products to improve effectiveness within theater of operation.					
FY 2012 Plans: Integrate enhanced classified PRSS products and conduct OCONUS performance testing. Mature PRD architecture and begin evaluation of prototype PRDs.					
FY 2013 Base Plans: Will conduct system test and evaluation, inclusive of PRD and receiver acceptance testing, system integration testing, and end-to-end network testing.					
Accomplishments/Planned Programs Subtotals	1.216	3.060	4.517	-	4.517

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Personnel Recovery Support Sys OPA: <i>Other Procurement, Army, G01101-Personnel Recovery Support System (PRSS)</i>	7.769	8.509	11.222		11.222		25.938	17.369	9.187	Continuing	Continuing
• Aircrew Integrated Systems APA: <i>Aircraft Procurement, Army AZ3110-ACIS includes funding of Personnel Recovery Support Equipment aircraft mods</i>	52.125	62.746	77.381		77.381		16.347	14.080	0.008	Continuing	Continuing

D. Acquisition Strategy

Execute PRSS program development effort for performance optimization through contracts with industry and Military Interdepartmental Purchase Requests to other Governmental agencies. Conduct Personal Reporting Device (PRD) development using full and open competition to encourage integration and innovation from private industry.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allot	Various Government:Huntsville, Alabama	0.243	0.338		0.343		-		0.343	Continuing	Continuing	Continuing
Subtotal			0.243	0.338		0.343		-		0.343			

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Personnel Recovery Support System Development Systems Engineering	SS/FP	Various:Product Development	1.451	1.939		3.347		-		3.347	Continuing	Continuing	Continuing
Subtotal			1.451	1.939		3.347		-		3.347			

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	RO	Various Organizations:Various Locations	0.389	0.583		0.452		-		0.452	Continuing	Continuing	Continuing
Subtotal			0.389	0.583		0.452		-		0.452			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	RO	Various Organizations:Various Locations	0.400	0.200		0.375		-		0.375	Continuing	Continuing	Continuing
Subtotal			0.400	0.200		0.375		-		0.375			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>				PROJECT S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>				
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.483	3.060		4.517		-		4.517			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>

FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

PRSS Upgrades & Adaptations to New Platforms	[REDACTED]																											
	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT S70: <i>PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
PRSS Upgrades & Adaptations to New Platforms	1	2014	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>	-	3.983	11.942	-	11.942	13.163	7.153	12.851	4.806	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This funding supports System Capability and Manufacturing Process Demonstration (SC&MPD) phase of Engineering and Manufacturing Development (EMD) tasks related to Individual Soldier Ballistic Protection. It funds system integration and formal DT/OT of preproduction and production representative systems leveraging advancements in technology to continue incremental improvements (sizing, functionality, heat management and reduction of weight/bulk) of body armor, and the transition of new technologies into production as they mature. It funds efforts to assess head protection component technologies to mitigate the effects of ballistic/blast and non-ballistic impact (crash) threats, continue to increase eyewear ballistic/blast protection, and transition to production.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
<p>Title: Soldier Protective Equipment</p> <p align="right">Articles:</p> <p>Description: Newly established funding line. Effort was previously executed in Program Element 0604601 S60. Effort is to increase the Warfighter lethality and mobility, by optimizing Soldier protection while effectively managing all life cycle aspect of Personal Protective Equipment (PPE).</p> <p>FY 2012 Plans: Complete stab and ballistic protection integration efforts for the Family of Concealable Body Armor & transition to production in FY13. Initiate System Capability & Manufacturing Process Demonstration (SC&MPD) of Soldier Protection System (SPS) Increment 1a. SPS is a Mission Tailorable Body Armor (MTBA) suite to provide integrated protection to Soldiers' Vital Torso, Head & Face & Extremities and transitions to production in FY14. Continue development, test and evaluation of self-diagnostic capability for ballistic insert integrity. Continue to improve ballistic & advanced laser protection on combat eyewear. Improve lens coatings to improve scratch & fog resistance.</p> <p>FY 2013 Base Plans: Will initiate Engineering and Manufacturing Development (EMD) of Soldier Protection System (SPS). Will award SPS development contracts & conduct initial design reviews, Limited User Assessments and initial down select of proposed solutions. Will continue efforts to develop Lightweight Enhanced Small Arms Protective Inserts (ESAPI), to include a self-diagnostic Smart Sensor and the integration/testing of key technologies supporting</p>	-	3.983 0	11.942	-	11.942

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
subsystems. Will leverage capabilities from the Family of Concealable Body Armor (FoCBA) Increment 1 (separate stab & ballistic vests) towards the development of FoCBA Increment 2 with increased vest capability integration towards achieving a single vest that is both stab and ballistic resistant.					
Accomplishments/Planned Programs Subtotals	-	3.983	11.942	-	11.942

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• VS4 6.4 RDTE: <i>RDTE, 0603827A.VS4, Soldier Protective Equipment</i>		1.846	14.823		14.823		11.800	4.550	10.150	0.000	53.517
• OMA: <i>OMA, 121017, Central Funding & Fielding</i>	71.429	72.171	75.961		75.961		124.365	125.670	127.008	0.000	671.965

D. Acquisition Strategy
Acquisition strategies vary in methods: (1) Low Risk Enhancements in 12-24 months or less to integrate, validate and make a production decision; (2) modernization (through spares) improvements which require limited RDT&E funding and are completed in 24-48 months and inserted as engineering changes to existing or pending production contracts; and (3) fully integrated development that requires substantial RDT&E funding and is completed in four years or more.

E. Performance Metrics
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army											DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0604601A: Infantry Support Weapons				VS5: SOLDIER PROTECTIVE EQUIPMENT					
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SETA Support	Various	PM SPE:various	-	0.200		0.300		-		0.300	Continuing	Continuing	0.000
Subtotal			-	0.200		0.300		-		0.300			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev/Integ Contracts	Various	Various:Various	-	1.400		8.714		-		8.714	Continuing	Continuing	0.000
Prod Sys Engineering Spt	MIPR	various:various	-	0.669		0.928		-		0.928	Continuing	Continuing	0.000
Subtotal			-	2.069		9.642		-		9.642			0.000
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various:Various	-	0.600		0.600		-		0.600	0.000	1.200	0.000
Subtotal			-	0.600		0.600		-		0.600	0.000	1.200	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DT/Ballistic & OT Test Costs	MIPR	Various DTC & OTC:Various DTC & OTC	-	1.114		1.400		-		1.400	Continuing	Continuing	0.000
Subtotal			-	1.114		1.400		-		1.400			0.000
Project Cost Totals			-	3.983		11.942		-		11.942			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army						DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>			PROJECT VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>			
	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete integration of stab & ballistic protection for FoCBA Incr 1									■																			
FoCBA Incr 1 MS C											■																	
Initiate and complete dev of FoCBA Incr 2									■	■	■	■	■	■	■	■												
FoCBA Incr 2 MS C																				■								
Soldier Protection System (SPS) Incr 1 MS B											■																	
Initiate & Complete Development (i/c Test & Evaluation) of SPS (Incr 1)									■	■	■	■	■	■	■	■												
SPS Incr 1 MS C																				■								
SPS RDTE Funded Low Rate Initial Production (LRIP)																				■								
SPS Initial Operational Test & Evaluation (IOT&E)																												
SPS Full Rate Production Decision																												
Complete Dev (i/c Test & Evaluation) of Lightweight ESAPI & Smart Sensor											■	■	■	■	■	■												
Transition Lightweight ESAPI & Smart Sensor technology to sustainment contracts																				■								
SPS Incr 2 MS B																				■								
Initiate & Complete Development (i/c Test & Evaluation) of SPS (Incr 2)																												
SPS Incr 2 MS C																												■

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601A: <i>Infantry Support Weapons</i>	PROJECT VS5: <i>SOLDIER PROTECTIVE EQUIPMENT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Complete integration of stab & ballistic protection for FoCBA Incr 1	1	2013	1	2013
FoCBA Incr 1 MS C	2	2013	2	2013
Initiate and complete dev of FoCBA Incr 2	1	2013	4	2014
FoCBA Incr 2 MS C	2	2015	2	2015
Soldier Protection System (SPS) Incr 1 MS B	2	2013	2	2013
Initiate & Complete Development (i/c Test & Evaluation) of SPS (Incr 1)	2	2013	4	2014
SPS Incr 1 MS C	1	2015	1	2015
SPS RDTE Funded Low Rate Initial Production (LRIP)	2	2015	2	2015
SPS Initial Operational Test & Evaluation (IOT&E)	3	2015	3	2015
SPS Full Rate Production Decision	4	2015	4	2015
Complete Dev (i/c Test & Evaluation) of Lightweight ESAPI & Smart Sensor	3	2013	4	2014
Transition Lightweight ESAPI & Smart Sensor technology to sustainment contracts	1	2015	1	2015
SPS Incr 2 MS B	1	2015	1	2015
Initiate & Complete Development (i/c Test & Evaluation) of SPS (Incr 2)	2	2015	3	2017
SPS Incr 2 MS C	4	2017	4	2017